Volume Contents

Volume 2 Issue No. 1 & 2 **February 1993**

Guest Editorial
I. Boyd 1

The Pyrolytic LCVD of High-purity Gold Tracks from Alkyl (Trialkylphosphine) Gold(I) Complexes
J. L. Davidson, P. John, D. K. Milne, P. G. Roberts, M. G. Jubber and J. I. B. Wilson 3

A Modified Plasma Source for Controlled Layer Thickness Synthesis in Laser Pulse Vapour Deposition (LPVD)
R. Dietsch, H. Mai, W. Pompe and S. Völlmar 19

Photophysical Processes in Low–fluence UV Laser—Material Interaction and the Relevance to Atomic Layer Processing
H. Helvajian, L. Wiedeman and H.-S. Kim 31

Low-temperature Plasma-assisted Processes for Fabrication of SiO_2/Si Heterostructures
G. Lucovsky 43

Laser-induced Deposition of Aluminium on Gallium Arsenide from Trimethylamine Alane
J. E. Bourée, D. Tonneau, A. Sayah, T. Frugier, A. Boulahia, D. Mencaraglia and J. M. Siffre 53

Laser Cleaning: Laser-induced Removal of Particles from Surfaces
W. Zapka, W. Ziemlich, W. P. Leung and A. C. Tam 63

Damage of STM Tips During Nanofabrication
N. Yokoi, S. Namba and M. Takai 71

Pulsed Laser Deposition of Some II–VI Compounds and Alloys
A. Aydınlı and A. D. Compaan 79

Excimer Laser Micromachining
J. Ihlemann, H. Schmidt and B. Wolff-Rottke 87

Laser Direct Writing of Gold Conductors from Metallorganic Inks
G. B. Scelsi, J. Notaro and C. Arnone 93

Ceramic Thin Films Deposited on Si(100) by Laser Ablation: Application as Buffer Layers for $YBa_2Cu_3O_7$ Films
F. Sánchez, M. Varela, X. Queralt, M. V. Carcia-Cuenca, J. Palau, R. Aguiar and J. L. Morenza 99

Volume 2 Issue No. 3 **May–June 1993**

Editorial 105

Redox Reactions on Modified Bilayer Lipid Membranes for Biosensing Device
P. Krysiński. 107

The Photovoltage Signals of Bacteriorhodopsin in Langmuir–Blodgett Films with Different Molecular Orientations
M. Ikonen, A. Sharonov, N. Tkachenko and H. Lemmetyinen 115

A Study of the Effect of *In Situ* Doping on the Crystallinity of LPCVD Polysilicon
M. L. Hitchman, C. W. Jones, J. Zhao and S. Shamlian 123

Modification of the Dark and Photoconductivity and the Optical Transmittance of Solution-grown CdS Thin Films
P. J. Sebastian, A. Sanchez and P. K. Nair. 133

Evidence for Solid State Electronic Conductivity in Mixtures of a Porphyrin and Its Two-electron Oxidation Product
L. R. Milgrom, J. P. Hill and S. Bone 143

Book Reviews 149

Diary of Conferences and Symposia 153

Announcement 156

Volume 2 Issue No. 4 **July–August 1993**

On the Electro-optic Properties of Single Crystals of Sodium, Potassium and Rubidium Acid Phthalates
A. Miniewicz and S. Bartkiewicz 157

A Comparative Investigation of the Oxidation of Silicon using H_2/O_2, TCA/O_2 and HCl/O_2 Mixtures
W. Ahmed, E. Ahmed and D. G. Armour 165

Neural Network Fitting and Prediction of Polarisability Tensors for Aromatic Hydrocarbons
R. W. Munn and N. S. Munn 175

Laser Activation and Metallisation of Oxide Ceramics
G. A. Shafeev 183

Structure of 2-(Iminocoumar-3-yl)-4-(coumar-3-yl)-thiazole, $C_{21}H_{14}N_2O_3S$
V. N. Baumer, O. A. Ponomaryov, A. I. Novikov, E. E. Lakin and V. P. Kuznetsov . 191

Electroluminescence from Phenylenevinylene-based Polymer Blends
H. Vestweber, J. Oberski, A. Greiner, W. Heitz, R. F. Mahrt and H. Bassler . . 197

Book Reviews 205

Diary of Conferences and Symposia 207

Volume 2 Issue No. 5 **September–October 1993**

The Kinetics of Charges in Dry Bacteriorhodopsin Langmuir–Blodgett Films—an Analysis and Comparison of Electrical and Optical Signals
M. Ikonen, A. Yu. Sharonov, N. V. Tkachenko and H. Lemmetyinen . . . 211

Visible Fluorescence on IR Excitation of Polar Dimethylaminobenzylidene 1,3-Indandione Crystals
L. Valkunas, D. Juodzbalis, A. Urbas, A. Gruodis, A. D. Durandin, E. A. Silinsh, A. Klimkans and S. Larsson 221

A Photolithographic Technique for Patterning Spin-coated Polyaniline Films
C. Di Bartolomeo, P. Barker, M. C. Petty, P. Adams and A. P. Monkman . . 233

Polyalkylthiophene Thin Films and their Characterisation with Transmission Spectroscopy
A. Heinämäki 237

Relationship between Microscopic and Macroscopic Structures of Organic Thin Films for SHG
I. G. Voigt-Martin, E. Zhou, P. Simon, R. W. Garbella, D. Yan, W. Paulus and H. Ringsdorf 245

Diary of Conferences and Symposia 269

Volume 2 Issue No. 6 **December 1993**

Review Paper

Group 2 Element and Related Compounds as Chemical Vapour Deposition Precursors for High-temperature Superconducting Metal Oxides
A. R. Barron and W. S. Rees Jr 271

The Influence of Chlorine on the Optical Properties of Monoclinic Lead Phthalocyanine Thin Films
A. Krier, A. K. Abass and R. A. Collins 289

Scanning Tunnelling Microscopy Investigations of Self-assembled Monolayers of Poly-(3-decyl-thiophene) on Graphite
A. Bonfiglio, R. Paradiso, E. di Zitti, D. Ricci, A. Bolognesi and W. Porzio . . 295

Formation of Silicon Nitride Films by Remote Plasma-enhanced Chemical Vapour Deposition
S. E. Alexandrov, M. L. Hitchman and S. Shamlian **301**

Letter to the Editor

***In-Situ* Mechanistic Studies of the Reaction of Trimethylgallium and Phosphine in Zeolite H-Y**
M. W. Anderson, G. K. Logothetis, M. E. Pemble, A. G. Taylor, N. C. Wallace and H. M. Yates **313**

Langmuir-Blodgett Films of Indandione-1,3 Pyridinium Betaine. I: Preparation, Electronic Structure, Optical Properties
M. A. Rutkis, L. E. Gerca, E. A. Silinsh, O. Y. Neilands, M. P. Roze, E. L. Berzinsh, A. B. Klimkans and S. Larsson **319**

Author Index **331**

Keyword Index **332**